

Montana DEQ Forest Fire Smoke Advisory

August 30, 2007

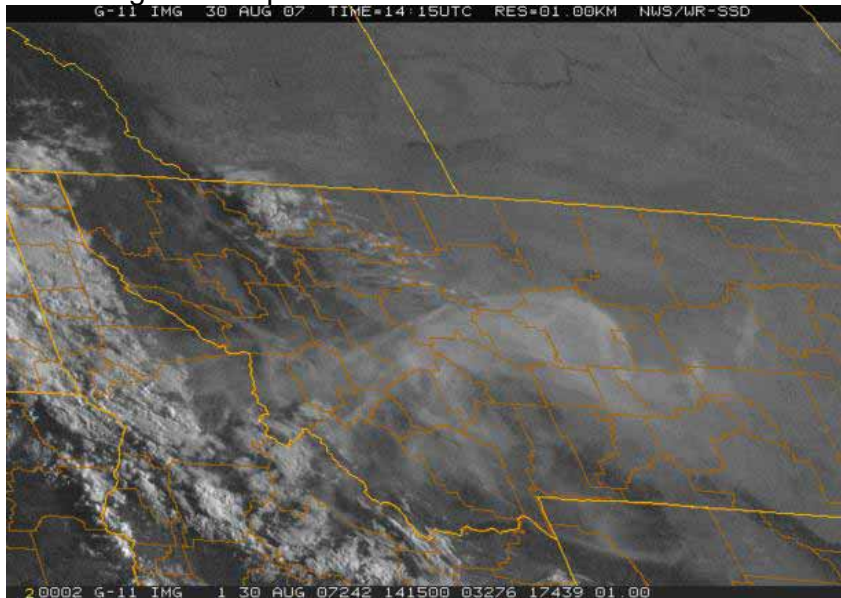
10:00 AM Thursday

FORECAST:

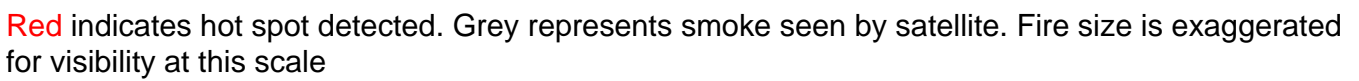
Fires in Idaho and western Montana were active into the evening last night and there is a very noticeable smoke plume aloft visible on this morning's satellite photo. Residual smoke trapped in valleys with active fires has built up to unhealthy levels in the northern Flathead, the Missoula area, the Bitterroot Valley and the area around Butte. Smoke is also visible in the Big Hole Valley, and the Rock Creek/Flint Creek Valleys.

A push of clouds and warm air from the southwest ahead of a trough approaching western Montana should allow most of the western valleys to mix out later today. Dispersion will be pretty good with convective activity through this evening and tomorrow and a good chance of wetting rains across the northwestern part of the state. Red Flag warnings for gusty winds and some dry lightning storms have been posted in some areas and some large plumes moving to the northeast are likely this afternoon. Record breaking heat is forecast over the next two days and this could produce more smoke from the local fires. Direct plume impacts from local fires could be a problem this afternoon and evening. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:

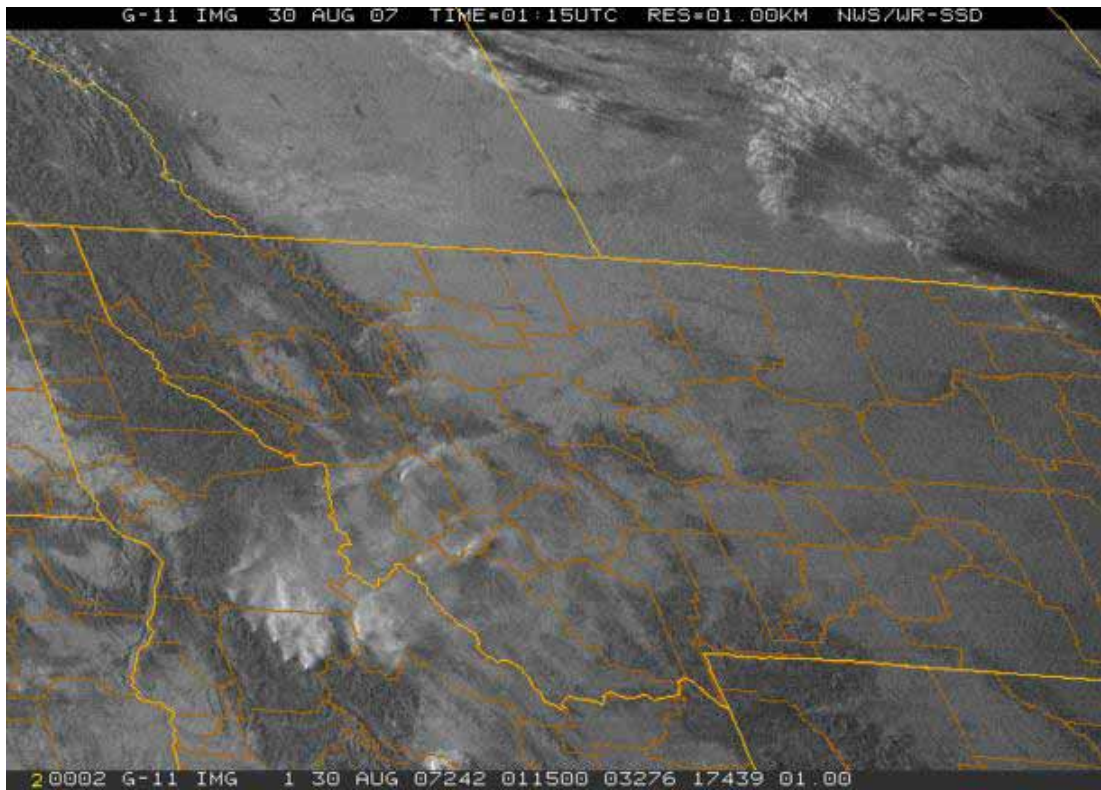


This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



http://activefiremaps.fs.fed.us/lq_fire2.php

This satellite photo taken at 7:15 PM last night shows the smoke plumes from the fires in Idaho and western Montana that combined into the plume aloft visible on this morning's satellite photo.



This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

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DISCUSSION:

Clear skies under a strong ridge have produced very intense valley inversions in many areas of western Montana. Smoke trapped under the inversions has built up to UNHEALTHY FOR SENSITIVE levels in Whitefish, Kalispell, Missoula, and Hamilton. Butte is at UNHEALTHY. Polson, Helena, Choteau, and Augusta are currently at MODERATE. Smoke levels in the valleys near the active fires are expected to be UNHEALTHY or worse. The inversions are keeping the smoke aloft over the central part of the state producing hazy skies. Some smoke will mix down later this morning for some strong intermittent surface impacts under the thickest parts of the plume aloft. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to determine current conditions.

John Coefield

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Updated 10 AM August 30, 2007

These advisories represent conditions between midnight and 8 AM and may change substantially through the day

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	Butte t24
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Whitefish T1 Kalispell T1 Missoula T24 Hamilton T24
<u>MODERATE</u>	Polson T24 Helena T8 Choteau T24 Augusta T24

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines
<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp> to evaluate possible health risks and make informed activity decisions.